

LA TROBE UNIVERSITY

POLICY ON LABORATORY HANDLING OF HUMAN BIOLOGICAL SPECIMENS

1. AIM AND SCOPE

This Policy aims to give explicit working procedures for laboratory staff and students who handle body fluids which put them at risk of being infected by AIDS.

2. RESPONSIBILITY FOR IMPLEMENTATION

Under the Occupational Health and Safety Act 1985, employees of the University are responsible for their own health and safety at the workplace to the extent of their capabilities. Any employee who in relation to a workplace has any degree of "management or control" over the workplace is required to "take such measures as are practicable to ensure that the workplace and the means of access to and egress from the workplace are safe and without risks to health." Thus supervisors of students are responsible for their safety in so far as they have management and control over the workplace where students are working.

Accordingly, and in compliance with the University Safety Policy, Deans, Chairpersons and Heads of Divisions, Departments and Colleges are responsible for:

- (i) determining whether staff under their management and control are at risk from contracting AIDS in the workplace;
- (ii) ensuring that staff and students who may be at risk follow these procedures.

N.B. - Although much care has gone into the preparation of this Code of Practice, of course no guarantee can be given that these procedures will ensure 100% protection. Staff and students are advised to keep abreast of current literature in this area. In particular, current advice of the AIDS Task Force should be sought in critical operations.

3. PUBLICATIONS OF THE AIDS TASK FORCE

Infection Control Guidelines - Acquired Immune Deficiency Syndrome (AIDS) and Related Conditions (May 1986)

Laboratory Biosafety Guidelines (September 1986)

For further information, contact:

Secretary, AIDS Task Force
PO Box 100
Woden ACT 2606

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4. INTRODUCTION

AIDS may be transmitted by blood, tissue and secretions or excretions that may contain blood (or the virus) such as saliva, semen, urine and faeces, and precautions should be directed at exposure to these body fluids. This Code of Practice for Laboratory Handling of Human Biological Specimens is based on (i) recommendations for Preventing the Transmission of AIDS in the Workplace, Bulletin No. 85/24 from the Communicable Diseases Branch, Department of Health (Australia) dated 29/11/85, (ii) a Code of Practice issued by the Psychology Department in 1986, and (iii) advice from Dr J May (Microbiology Department) and Dr C Rana (Director of the University Health Service).

5. PROCEDURE

5.1 Always wear protective clothing when handling samples. This applied particularly to disposable gloves. Masks are available for use when handling samples (such as urine) which may aerosol. Buttoned lab coats, or gowns tied at the back, must be worn at all times when handling (collecting, assaying, disposing of) any body fluid.

5.2 After handling samples, the gloves should be removed in such a way that the skin does not come into contact with the contaminated glove. Ask laboratory personnel to show you how to do this. See attached diagram (over).

Place the gloves in a plastic bag and at the end of the collection session tie the top of the bag and place the bag in the bin, which has been specially designated for this purpose. (Contents of the bin will be autoclaved). All disposable plastics (e.g. pipette tips) must be placed in this bin after contact with urine, plasma or saliva for autoclaving. (It is assumed that autoclaving carried out by laboratory staff is quicker and more direct than the incineration process. Although incineration is effective, it may be some time before infected items are actually burnt). "Sharps" (syringe needles, glass pipettes etc) should be placed in a plastic or metal container, autoclaved, and then placed in a rubbish container as for any sharp object. Syringe needles should not be replaced into their protective caps before disposal, as this leads to "finger-stick" incidents.

5.3 If any body fluid is spilled, it should be cleaned up immediately with a liberal quantity of 70% alcohol or 10% Biogram. This can be obtained from laboratory personnel. Tissues etc used to clean up spills must be placed in the bin allocated for this purpose. If a lab coat is contaminated with body fluid, it must be removed and placed in a chlorine bath for 30 minutes. It must be thoroughly rinsed in cold water and put out for the laundry service. Remember to wear disposable gloves when handling contaminated articles and dispose of the gloves in the bin, which has been specially allocated for this purpose.

Spills and personal contamination should be reported to the Safety Officer on an Incident Report Form. Advice should be sought from the Health Service on whether a blood test is appropriate.

5.4 After collection of samples or assay samples, swab down all surfaces immediately the task is completed using liberal quantities of 70% alcohol or 10% Biogram. Use paper towel or tissue to do this and place the towel or tissue directly into the bin, which has been specially allocated for this purpose for autoclaving.

5.5 Never mouth pipette in the laboratory. This applies not only to body fluids. It is never possible to be certain that pipettes (or any other lab equipment) have been thoroughly cleaned. Always use a pipette pump.

CAUTION: When inserting pipette into pump, hold the pipette as close to the pipette pump as possible to reduce the change of the pipette breaking. (Several finger lacerations have been recorded at LTU from this type of incident).

5.6 Sterilise all equipment after use. This includes:

- (1) urine collectors
- (2) pipettes
- (3) measuring cylinders
- (4) pipette fillers
- (5) pH meter probe and magnetic stir bar
- (6) automatic pipette handles
- (7) trays for collecting first eluate
- (8) plastic beakers
- (9) plastic extension tubes

Items 1-3 should be immersed in a chlorine bath prepared fresh daily, (1:10 dilution of 12.5% available chlorine solution) for 30 minutes dwell time as soon as possible after they have been used.

Items 4-6 should be swabbed with a liberal quantity of 70% alcohol after use.

Items 7-9 should be left to soak in a 70% alcohol solution for half an hour immediately after use. Then wash them in the usual way.

5.7 All urine is to be carefully disposed of preferably by autoclaving. (After addition of Biogram to about 2%, it may be poured down the sink in a fume cupboard). Disposable gloves, safety glasses and a buttoned-up lab coat must be worn. A disposable lab coat or gown may also be worn.

During the disposal of the urine, pour down the sink an amount of chlorine solution (fresh 1:10 dilution of a 25% available chlorine solution) which is approximately equal to the volume of urine, which has been disposed of. Do this at regular and frequent intervals e.g. after each 250ml of urine.

Place the empty urine tubes in a plastic bag in the holder, which has been specially allocated for this purpose.

On completion of disposal of urine samples, clean the bench surface of the fume hood with copious amounts of fresh 1:10 dilution of 12.5% available chlorine solution, or 10% Biogram. Wipe down with paper towel and place the paper towel and gloves in a plastic bag and dispose of this in the bin designated for this purpose.

The plastic bag containing the empty urine tubes must be tied at the top with a knot and placed in the special disposal bin. The contents of the special disposal bin will be autoclaved.

5.8 Hands should be washed at completion of work with soap, or "Hexol".

Removal of gloves

- 1** Grasp the back of one glove and pull it forward (see diag. 1) thus turning the glove inside out. Dispose of this glove into the appropriate bin.
- 2** Carefully insert the thumb of the hand not gloved under the cuff of the remaining glove (see diag. 2) ensuring that the clean hand does not come into contact with the contaminated glove.
Pull the glove forwards (see diag. 3) until it is partly removed. Then grasp the clean interior of the glove with the hand not gloved and complete removal of the glove. Dispose of the glove into the appropriate bin.
- 3** Wash hands using an approved antiseptic soap such as "Hibiclens".